

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 2, 3, 28-30, 32-36, and 44-46 are pending in the application, with claim 46 being the independent claim. Claims 1, 4, 6-10, 26, 27, 31, 40, 41 and 43 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. New claim 46 is sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

The present application "claims priority under U.S.C. 119(e) from U.S. Provisional Application No. 60/235,190, entitled 'E-Commerce Security Processor,' as of filing on Sep. 20, 2000, the disclosure of which is herein incorporated by reference for all purposes." (Specification, ¶[0001]). The specification has been amended to include subject matter from this provisional that was incorporated by reference. The material being inserted is material previously incorporated by reference and the amendment contains no new matter. As stated in the M.P.E.P. "[r]eplacing material incorporated by reference with the actual text is not new matter." M.P.E.P. §2163.07(b).

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 1, 4, 6-10, 26, 27, 29-31, 33-36, 40, 41, 44, and 45 were rejected under 35 U.S.C. §103(a) as being unpatentable over Collins, U.S. Patent No. 6,378,072 (Collins) in view of "Data Sheet 7751 Encryption Processor," Network Security Processors, June 1999 (7751 Data Sheet) and Huynh, U.S. Patent No. 6,983,366 (Huynh). Applicant respectfully traverses this rejection.

The combination of Collins, 7751 Data Sheet, and Huynh does not teach or suggest each and every limitation of newly presented independent claim 46. Collins describes a cryptographic system having a cryptographic processor 110 and one or more cryptographic co-processors 115. (Collins, col. 3, line 64-col. 4, line 2). As described in Collins, the encryption or decryption of a *single* message packet is broken into one or more exponentiation tasks which can be performed in parallel by the cryptographic co-processors 115. (Collins, col. 6, lines 48-66).

As described in the 7751 Data Sheet, a data block is processed in a specific order by the four processing units depending on the type of operation (encode or decode) being performed. (Data Sheet, p. 10). As illustrated in FIG. 31, during an encode operation authentication processing is always performed prior to encryption processing. (Data Sheet, p. 55). Furthermore, the encode and decode command include a Context in the session # field. The Context is used by all processing units while encoding the data block. (Data Sheet, p. 55). Nowhere does the Data Sheet teach or describe how a second packet could be processed by one or more of the processing units concurrently with a first packet without disrupting the processing being performed on the first packet.

Huynh describes a packet processor that performs a combination of encryption and authentication on data packets. (Huynh, Abstract). In Huynh, the "cryptography component 108 encrypts data received in a First-In-First-Out input queue (InFIFO) 128 and passes encrypted data to the authentication components 112 and 114." (Huynh, col. 9, lines 20-24). Huynh does not describe that encryption operations and authentication operations for the same packet are performed in parallel.

Accordingly, the combination of Collins, the 7751 Data Sheet, and Huynh does not teach or suggest a method including:

- performing authentication operations on a set of header data and the payload data for the first packet to generate an authentication code;

- performing encryption operations on a set of data in the payload data for the first packet, wherein the encryption operations on the set of payload data for the first packet is performed in parallel with the authentication operations for the first packet;

- receiving, in the chip, header data and payload data for a second packet;

- performing encryption operations on any remaining payload data for the first packet and the authentication code for the first packet;

- performing authentication operations on a set of header data and the payload data for the second packet, wherein the authentication operations on the set of header data and payload data for the second packet is performed simultaneously with the encryption operations on the remaining payload data and authentication code for the first packet; and

- passing the cryptographically processed first packet from the chip to the off-chip processor,

- wherein the authentication and encryption operations for the first packet are performed within the chip in a single pass.

as recited in newly presented independent claim 46. For at least these reasons, newly presented independent claim 46 is patentable over the combination of Collins, the Data Sheet, and Huynh. Claims 29, 30, 33-36, 44, and 45 depend from claim 46. For

at least the above reasons, and further in view of their own features, dependent claims 29, 30, 33-36, 44, and 45 are patentable over the combination of Collins and the Data Sheet. Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Collins, 7751 Data Sheet, Huynh, and SSL3spec

In the Office Action, claims 2 and 43 were rejection under 35 U.S.C. §103(a) as being unpatentable over Collins, 7751 Data Sheet, Huynh in view of Freier, et al, "The SSL Protocol Version 3.0," November 18, 1996, pp. 1-12 (SSL3spec). Applicant respectfully traverses this rejection.

Claim 2 depends from independent claim 46. Claim 43 has been cancelled by the above amendment. The SSL3spec does not overcome the deficiencies of Collins, 7751 Data Sheet, and Huynh described above relative to claim 46. For at least these reasons, and further in view of its own features, claim 2 is patentable over the combination of Collins, 7751 Data Sheet, Huynh and SSL3spec. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

Collins, 7751 Data Sheet, Huynh, and TLSspec

In the Office Action, claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over Collins, 7751 Data Sheet, Huynh in view of Dierks, et al, "The TLS Protocol Version 1.0" (TLSspec). Applicant respectfully traverses this rejection.

Claim 3 depends from claim 46. The TLSspec does not overcome the deficiencies of Collins, 7751 Data Sheet, Huynh described above relative to claim 46. For at least these reasons, and further in view of its own feature, claim 3 is patentable

over the combination of Collins, 7751 Data Sheet, Huynh and TLSspec.

Reconsideration and withdrawal of the rejection is therefore respectfully requested.

Collins, 7751 Data Sheet, Huynh, SSL3spec, Ganapathy

In the Office Action, claim 32 was rejected under 35 U.S.C. §103(a) as being unpatentable over Collins, 7751 Data Sheet, Huynh in view of SSL3spec, further in view of Ganapathy, U.S. Patent 6,557,096 (Ganapathy). Applicant respectfully traverses this rejection.

Claim 32 depends from claim 46. Ganapathy does not overcome all the deficiencies of the combination of Collins, 7751 Data Sheet, Huynh and the SSL3spec relative to independent claim 46 described above. For at least these reasons and further in view of their own features, claim 32 is patentable over the combination of Collins, 7751 Data Sheet, Huynh, SSL3spec, and Ganapathy. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

Collins, 7751 Data Sheet, Huynh, and Gaytan

In the Office Action, claim 28 was rejected under 35 U.S.C. §103(a) as being unpatentable over Collins, 7751 Data Sheet, Huynh in view of Gaytan, U.S. Patent 5,638,367 (Gaytan). Applicant respectfully traverses this rejection.

Claim 28 depends from claim 46. Gaytan does not overcome all the deficiencies of Collins, 7751 Data Sheet, Huynh relative to independent claim 46 described above. For at least these reasons and further in view of its own features, claim 28 is patentable over the combination of Collins, 7751 Data Sheet, Huynh and

Gaytan. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

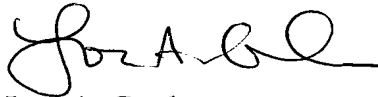
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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Date: January 31, 2008

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